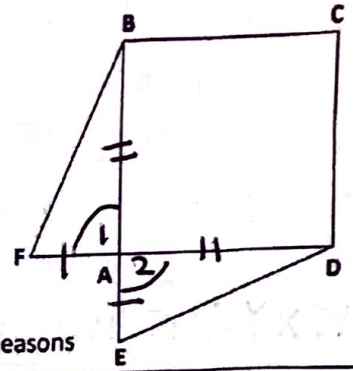


9. Given: ABCD is a square

$$\overline{AE} \cong \overline{AF}$$

Prove: $\triangle BAF \cong \triangle DAE$



Statements

Reasons

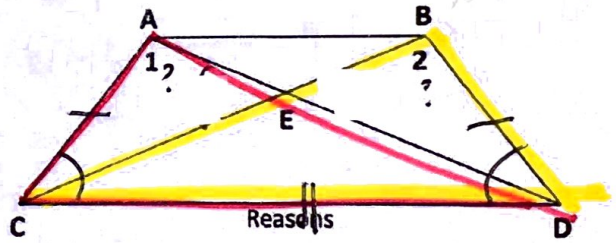
- 1) ABCD is a square
 $\overline{AE} \cong \overline{AF}$
- 2) $\overline{BA} \cong \overline{AD}$
- 3) $\angle 1 \cong \angle 2$
- 4) $\triangle BAF \cong \triangle DAE$

- 1) Given
- 2) if quad. is square, all sides \cong
- 3) all vertical \angle s \cong
- 4) SAS

10. Given: ABCD is an isosceles trapezoid

Prove: $\angle 1 \cong \angle 2$

Statements

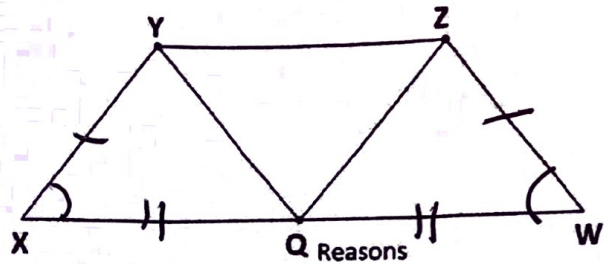


- 1) ABCD isos. trapezoid
- 2) $\overline{AC} \cong \overline{BD}$
- 3) $\overline{CD} \cong \overline{DC}$
- 4) $\angle ACD \cong \angle BDC$
- 5) $\triangle ACD \cong \triangle BDC$
- 6) $\angle 1 \cong \angle 2$

- 1) Given
- 2) if quad. is isos. trap., then legs \cong
- 3) Reflexive Property
- 4) if quad. is isos. trap., then base \angle s \cong
- 5) SAS
- 6) CPCTC

11. Given: $WXYZ$ is an isosceles trapezoid
 Q is the midpoint \overline{WX}

Prove: $\triangle YQZ$ is isosceles
 Statements



- ① $WXYZ$ is isos. trap.
 Q midpt. \overline{WX}
- ② $\overline{XY} \cong \overline{WZ}$
- ③ $\angle X \cong \angle W$
- ④ $\overline{XQ} \cong \overline{QW}$
- ⑤ $\triangle XYQ \cong \triangle WZQ$
- ⑥ $\overline{YQ} \cong \overline{ZQ}$
- ⑦ $\triangle YQZ$ is isosceles

- ① Given
- ② if quad. is isos. trap., then legs are \cong
- ③ if quad. is isos. trap., then base \angle s \cong
- ④ Defn midpoint
- ⑤ SAS
- ⑥ CPCTC
- ⑦ if a \triangle has 2 \cong sides then it is isosceles.